

IN THE SPECIFICATION:

Please amend the specification as follows:

Please substitute the paragraph beginning at page 1, line 7, with the following.

-- The present invention relates to a moving/guiding apparatus for guiding a movable body, e.g., an electron beam drawing apparatus or a precision measurement instrument, which repeats high-speed movement and precision positioning or moves by scanning at high precision in a non-atmospheric pressure, and an exposure apparatus, and the like, using the same. --

Please substitute the paragraph beginning at page 2, line 19, with the following.

-- (4) When the stage moves, the position of a barycenter of the system within the plane changes. Hence, when the stage is driven, oscillation such as pitching or yawing is induced. This also degrades the dynamic posture precision. --

Please substitute the paragraph beginning at page 3, line 19, with the following.

-- It is still another object of the present invention to provide a moving/guiding apparatus or the like which guides movement of a movable body, e.g., an electron beam drawing apparatus or a precision measurement instrument, which repeats high-speed movement and precision position or moves by scanning at high precision in a non-atmospheric atmosphere. --

Please substitute the paragraph beginning at page 6, line 8, with the following.

-- (4) Pitching and rolling are small as , since they are transmitted merely through the gap of the bearing. The dynamic posture precision is improved in this respect as well. --

Please substitute the paragraph beginning at page 9, line 25, and ending on page 10, line 10, with the following.

-- Figs. 1 to 4 are schematic views showing an example of a moving-guiding apparatus according to the first embodiment of the present invention, in which Fig. 1 is a perspective view, Fig. 2 is a lower surface view of the moving/guiding apparatus of Fig. 1 from which a main body surface plate is removed, Fig. 3 is a sectional view taken along the line A - A of Fig. 1, and Fig. 4 is a sectional view taken along the line B - B of Fig. 1. In the sectional view taken long the line B - B of this embodiment, a pre-pressurizing mechanism is not used. The vacuum container (8) is shown in only Fig. 8, and is omitted in the other drawings in order to avoid complexity in the drawings. --

Please substitute the paragraph beginning at page 13, line 10, with the following.

-- The above mechanism is accommodated in the vacuum container 8 shown in Fig. 2. The vacuum container 8 is set on the main body surface plate 12, and accommodates the stage surface plate 11, X-direction guides 21 and 211, Y-direction guides 22 and 221, X-Y movable body 3, X-direction movable body 41, Y-direction movable body 42, and static pressure bearings 611, 612, 621, 622, 631, 632, and 641, and the like, entirely. The driving force transmission rods 911, 912, 921, and 922 can be projected from and retracted in the vacuum container 8. --

Please substitute the paragraph beginning at page 16, line 23, with the following.

-- (Embodiment of A Semiconductor Manufacturing System) --.

Please substitute the paragraph beginning at page 16, line 24, and ending on page 17, line 8, with the following.

-- An example of a manufacturing system for manufacturing a semiconductor device (e.g., a semiconductor chip such as an IC or LSI, a liquid crystal panel, a CCD, a thin film magnetic head, a micromachine, and the like), by using the apparatus according to the present invention (such as the exposure apparatus described in the second embodiment) will be described. With this manufacturing system, maintenance and services such as ~~trouble-shooting~~ trouble-shooting, periodical maintenance, or providing software for a manufacturing apparatus installed at a semiconductor manufacturing factory are performed by utilizing a computer network outside the factory. --

Please substitute the paragraph beginning at page 17, line 9, and ending on page 18, line 5, with the following.

-- Fig. 6 expresses the entire system seen from a certain angle. Referring to Fig. 6, reference numeral 1101 denotes a business office of a ~~vender~~ vendor (e.g., an apparatus supplier), which provides a semiconductor device manufacturing apparatus. An example of the manufacturing apparatus includes, e.g., semiconductor manufacturing apparatuses for performing various types of processes used in a semiconductor manufacturing factory, e.g., a pre-process device (e.g., a lithography apparatus such as an exposure apparatus, a resist processing apparatus, and an etching apparatus, a heat-treating apparatus, a film forming apparatus, a planarizing apparatus, and the like) or a post-processing device (e.g., an assembling apparatus, an inspection apparatus, and the like). The business office 1101 has a host management system 1108 for

providing a maintenance database for the manufacturing apparatus, a plurality of operation terminal computers 1110, and a local area network (LAN) 1109, which connects the host management system 1108 and operation terminal computers 1110 to make up an ~~Intranet~~ intranet or the like. The host management system 1108 has a gateway for connecting the LAN 1109 to the Internet 1105 as a network outside the business office, and a security function of limiting an external access. --

Please substitute the paragraph beginning at page 18, line 6, and ending on page 19, line 20, with the following.

-- Reference numerals 1102 to 1104 denote manufacturing factories of the semiconductor manufacturer as the user of the manufacturing apparatus. The manufacturing factories 1102 to 1104 may be factories belonging to different manufacturers, or factories (for example, a pre-processing factory, a post-processing factory, and the like) belonging to one manufacturer. Each of the factories 1102 to 1104 has a plurality of manufacturing apparatuses 1106, a local area network (LAN) 1111 for connecting the manufacturing apparatuses 1106 to make up an intranet, or the like, and a host management system 1107 serving as a monitoring unit for monitoring the operating states of the respective manufacturing apparatuses 1106. The host management system 1107 provided in each of the factories 1102 to 1104 has a gateway for connecting the LAN 1111 in each factory to the Internet 1105 as a network outside the factory. Thus, the LAN 1111 of each factory can access the host management system 1108 of the ~~vender~~ vendor 1101 through the Internet 1005. Access by only those users limited by the security function of the host management system 1108 is allowed. More specifically, the factory informs the ~~vender~~ vendor

of status information (e.g., the symptom of a manufacturing apparatus with a trouble) indicating the operating state of each manufacturing apparatus 1106. The factory can receive response information (e.g., information designating a remedy against a trouble, or remedy software or data) regarding this notice, and maintenance information such as update software or help information from the ~~vender~~ vendor. Data communication between the factories 1102 to 1104 and the ~~vender~~ vendor 1101 and that in the LANs 1111 of the respective factories are done using a communication protocol (TCP/IP) generally used in the Internet. In place of utilizing the Internet as a network outside the factory, a high-security dedicated line network (e.g., an ISDN) that does not allow access by a third party may be utilized. The host management system is not limited to one provided by the ~~vender~~ vendor. The user may make up a database and place it on an external network, and the plurality of factories of the user may be allowed to access the database. --

Please substitute the paragraph beginning at page 19, line 21, and ending on page 20, line 24, with the following.

-- Fig. 7 is an illustration expressing the entire system of this embodiment seen from an angle different from that of Fig. 6. In the aforementioned example, the plurality of user factories each having the manufacturing apparatuses, and the management system of the ~~vender~~ vendor of the manufacturing apparatuses are connected to each other through an external network. Information on production management of each factory and at least one manufacturing apparatus are data-communicated through the external network. In contrast to this, in this example, factories each having manufacturing apparatuses of a plurality of ~~venders~~ vendors, and the

management systems of the respective ~~venders~~ vendors of the plurality of manufacturing apparatuses are connected to each other through an external network outside the factories. The maintenance information on the respective manufacturing apparatuses are data-communicated through the external network. Referring to Fig. 7, reference numeral 1201 denotes a manufacturing factory of a manufacturing apparatus user (e.g., a semiconductor device manufacturer). Manufacturing apparatuses for performing various types of processes, e.g., an exposure apparatus 1202, a resist processing apparatus 1203, and a film formation processing apparatus 1204 are introduced to the manufacturing line of the factory. Although only one manufacturing factory 1201 is illustrated in Fig. 7, in fact, a plurality of factories form a network in this manner. The apparatuses of each factory are connected to each other through a LAN 1206 to make up an intranet. A host management system 1205 performs the operation management of the manufacturing line. --

Please substitute the paragraph beginning at page 20, line 25, and ending on page 21, line 18, with the following.

-- Each business office of the ~~venders~~ vendors (e.g., apparatus suppliers), e.g., an exposure apparatus manufacturer 1210, a resist processing apparatus manufacturer 1220, or a film formation apparatus manufacturer 1230, has a host management system 1211, 1221, or 1231 for remote-control maintenance of the devices that the users supplied. The host management system has a maintenance database and a gateway to an external network, as described above. The host management system 1205 for managing the respective apparatuses in the manufacturing factory of the user and the management systems 1211, 1221, and 1231 of the ~~venders~~ vendors of

the respective apparatuses are connected to each other through the Internet as an external network 1200, or a private line network. In this system, when a trouble occurs in any one of a series of manufacturing devices of the manufacturing line, the manufacturing line stops operation. However, this situation can be quickly coped with by receiving remote-control maintenance from the ~~vender~~ vendor of the device where the trouble occurs through the Internet 1200. Downtime of the manufacturing line can thus be minimized. --

Please substitute the paragraph beginning at page 21, line 19, and ending on page 22, line 22, with the following.

-- Each manufacturing apparatus set in the semiconductor manufacturing factory has a display, a network interface, and a computer for performing network access software and apparatus operating software stored in a storage. For example, the storage is a stored memory, a hard disk, or a network file server. The network access software includes a dedicated or general web browser, and provides a user interface, an example of which is shown in, e.g., Fig. 8, on the display. The operator who manages the manufacturing apparatus in each factory inputs information such as the type of manufacturing apparatus 1401, serial number 1402, subject of trouble 1403, occurrence date 1404, degree of urgency 1405, symptom 1406, remedy 1407, progress 1408, and the like, in the enter boxes on the display. The input information is transmitted to the maintenance database through the Internet. Appropriate maintenance information corresponding to the transmitted information is sent back from the maintenance database and shown in the display. The user interface provided by the web browser realizes hyperlink functions 1410 to 1412, as shown in Fig. 8. Thus, the operator can access further

detailed information of each item, and ~~can~~ download ~~update~~ updated software to be used for the manufacturing apparatus or operation guide (help information) for reference by the factory operator from the software library of the ~~vender~~ vendor. The maintenance information provided by the maintenance database also includes information concerning the present invention described above. The software library also provides ~~update~~ updated software that realizes the present invention. --

Please substitute the paragraph beginning at page 22, line 23, and ending on page 23, line 24, with the following.

-- A semiconductor device manufacturing process utilizing the above manufacturing system will now be described. Fig. 9 shows the flow of an overall semiconductor device manufacturing process. In step 1 (design circuit), a semiconductor device circuit is designed. In step 2 (fabricate mask), a mask on which the designed circuit pattern is formed is fabricated. In step 3 (manufacture wafer), a wafer is manufactured by using a material such as silicon. In step 4 (wafer process), called a pre-process, an actual circuit is formed on the wafer by lithography using the prepared mask and wafer. In step 5 (assembly), called a post-process, a semiconductor chip is formed by using the wafer fabricated in step 4, and includes processes such as an assembly process (dicing and bonding) and a packaging process (chip encapsulation). In step 6 (inspection), inspections such as the operation confirmation test and durability test of the semiconductor device manufactured in step 5 are conducted. After these steps, the semiconductor device is completed, and shipped (step 7). The pre-process and post-process are performed at different dedicated factories, and maintenance for these processes is performed in



units of factories by the remote-control maintenance system described above. Information on manufacture management and apparatus maintenance is data-communicated between the pre-process factory and post-process factory through the Internet or private line network. --

Please substitute the paragraph beginning at page 23, line 25, and ending on page 24, line 20, with the following.

-- Fig. 10 shows the detailed flow of the wafer process. In step 11 (oxidation), the surface of the wafer is oxidized. In step 12 (CVD), an insulating film is formed on the wafer surface. In step 13 (form electrode), an electrode is formed on the wafer by vapor deposition. In step 14 (implant ion), ions are implanted in the wafer. In step 15 (resist processing), a photosensitive agent is applied to the wafer. In step 16 (exposure), the above-mentioned exposure apparatus exposes the circuit pattern of the mask to the wafer. In step 17 (developing), the exposed wafer is developed. In step 18 (etching), the resist is etched except for the developed resist image. In step 19 (remove resist), an unnecessary resist after etching is removed. These steps are repeated to form multiple circuit patterns on the wafer. As the maintenance of the manufacturing devices used in the respective steps is performed by the remote-control maintenance system described above, ~~troubles are~~ trouble is prevented. Even if a trouble should occur, it can be coped with, and the normal operating condition is restored quickly. The semiconductor device productivity can thus be improved to be higher than that in the prior art. --

Please substitute the paragraph beginning at page 25, line 8.

-- Preferably, the first movable body is guided in one side by the guide (21, 611) fixed on the surface plate and ~~retraining~~ restrained in vertical and horizontal directions entirely, and is guided in the other side by the stationary guide (211, 612) ~~retraining~~ restrained only in the vertical direction. Similarly, the second movable body is guided in one side by the guide (22, 621) fixed on the surface plate and ~~retraining~~ restrained in vertical and horizontal directions entirely, and is guided in the other side by the stationary guide (221, 622) ~~retraining~~ restrained only in the vertical direction. Hence, the present invention has the following effects. --

Please substitute the paragraph beginning at page 27, line 6, with the following.

-- (11) Since a driving operation is performed from outside the vacuum container, the vacuum container can be downsized. --